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ABSTRACT

In response to calls for increased accountability in educational institutions, the American Association of Community Colleges developed the following 13 core indicators of institutional effectiveness: student goal attainment, fall to fall persistence rates; degree completion rates; placement rates in the work force; employer assessments of students; number and rate of transfers; performance after transfer; basic skills students' success in subsequent coursework; demonstration of critical literacy and citizenship skills; client assessment of programs; responsiveness to community needs; and service area participation. The Colorado Community College and Occupational Education System has identified several challenges for implementing these indicators in the state, including the following: (1) developing an instrument for determining student goals at entry; (2) establishing a longitudinal database to track student outcomes; (3) tabulating state employment information; (4) developing mechanisms to survey employers and maximize response rates; (5) assessing student transfer intentions at matriculation or later at the campus level; (6) addressing literacy and citizenship as an outcome; (7) developing data sources to address client satisfaction and determine opinions about programs and services; (8) conducting community needs assessment, focus groups, and surveys to determine responsiveness to community needs; and (9) addressing participation rates in the service area through attendance records and community impact surveys. (TGI)

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National, State, and Local Challenges for Community Colleges

The landscape of higher education, especially across community colleges, is changing dramatically. Student Right to Know legislation mandating reporting of graduation statistics, dramatic changes in institutional eligibility requirements for federal financial aid, evolving requirements for accreditation, reporting mandates for Perkins vocational funds, changing student populations, and increased scrutiny by state governments and the public have created a challenging environment for community colleges. Many institutions have responded to this agenda by identifying performance indicators and building effectiveness models. Experience shows that some of these models are uncomplicated, some are complex. Other institutions, perhaps out of annoyance, simply ignore effectiveness indicators until an impending accreditation review or required state or federal report reawakens interest.

At the same time, stakeholders in our colleges are continually faced with making judgements about institutional effectiveness. Students, community leaders, legislators, business and industry officials, faculty, and administrators make choices about our institutions on a continual basis. As they make these choices they intersperse information from their experience about high quality (effective) performance and poor quality (ineffective) performance into the effectiveness equation. These individuals may draw their judgements from *direct* experience with a college or through information gleaned from a *secondary* source , i.e., newspapers, television advertising, college catalogs, conversations with friends, etc. Human nature virtually guarantees that when individuals lack direct information they will not

delay passing judgement on a college. Instead, their judgments will come from secondary sources which almost always have little or nothing to do with institutional quality.

Community Colleges typically turn to the factors which are easily quantified to respond to questions about institutional goals. Historically, these measures have included growth in programs, budgets, and enrollments. Enrollment growth is the most frequently used indicator of effectiveness, but its use as the primary indicator of effectiveness opens the community college to attack by critics who claim that quantity, as expressed by enrollment, camouflages a lack of quality. Other indicators, besides growth, may better serve the long-term health of the community colleges, provided that these indicators account for differences in size, location, funding, campus culture, and administrative philosophies.

Colleges without a framework to address effectiveness also find it difficult to argue persuasively in the state and federal policy and budget setting arenas. This vacuum has spurred legislators and other policy-makers to create a sweeping, and often bewildering and contradictory, array of accountability requirements. In Colorado, the state pursues accountability through HB 1187 which requires campuses to submit an annual report to the Colorado Commission on Higher Education. On the federal level, the impact of requirements found under recent federal legislation will require each campus to adopt a framework for educating internal and external audiences about institutional effectiveness.

Response by the American Association of Community Colleges

In 1994, the American Association of Community Colleges published a landmark report, Community Colleges: Core Indicators of Effectiveness.[1] This report was the result of work by community college executive officers, university professors, and higher education officials. Written to provide a sorely needed focus for the issues discussed above, this work provides a small group of "core," measures which are vital to each institution. In this light, the term "core" denotes a critical, focused

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[1] American Association of Community Colleges, (1994). Community Colleges: Core Indicators of Effectiveness (AACC Special Reports No. 4), AACC: Washington, D.C.

group of indicators, reduced from a multiplicity of earlier models, measures, and methodologies. At conclusion, characteristics of the AACC core indicators were generalizability across institutions, ease and efficiency of use, relevance to the community college mission, and significance to multiple customers.

It is the authors' belief that core indicators can improve institutional performance in fundamental ways beyond the act of assessment. These indicators are intended to help the institution focus on those matters that are the most indicative of and important to student success. Ultimately, the report states that the use of core indicators will increase the public's understanding of the community college, especially at the policy level, making it more likely that external decision makers will hold our institutions accountable on matters that are appropriate and substantive.

AACC's 13 CORE INDICATORS OF EFFECTIVENESS

Student Progress

- Core Indicator 1: Student Goal Attainment
- Core Indicator 2: Persistence (Fall to Fall)
- Core Indicator 3: Degree Completion Rates

Career Preparation

- Core Indicator 4: Placement Rate in the Work Force
- Core Indicator 5: Employer Assessment of Students

Transfer Preparation

- Core Indicator 6: Number and Rate Who Transfer
- Core Indicator 7: Performance After Transfer

Developmental Education

- Core Indicator 8: Success in Subsequent, Related Coursework

General Education

- Core Indicator 9: Demonstration of Critical Literacy Skills
- Core Indicator 10: Demonstration of Citizenship Skills

Customized Education

- Core Indicator 11: Client Assessment of Programs and Services

Community Development

- Core Indicator 12: Responsiveness to Community Needs
- Core Indicator 13: Participation Rate in Service Area

Challenges in Implementing Core Indicators in Colorado.

Colleges within the CCCOES system are well poised to develop these indicators. Their implementation would require only minor modifications to the ways in which data is collected. Required assessment and program review processes have developed campus expertise necessary for developing core indicators. Each institution annually develops an accountability document for the CCHE. Campuses indicate that CCHE's process is helpful for internal purposes, but could be improved for internal use by focusing on outcomes which are important to the community college. As campuses have become more sophisticated in dealing with required accountability and have increased their expertise, the time may be right to migrate to a more meaningful structure to assess quality.

Campuses also have had to respond to new information needs mandated by the Carl Perkins Vocational and Technical Education Act. The result has been to demonstrate the need to track students in vocational programs from program entry through employment. CCCOES staff have provided several applied workshops in methodology for establishing a longitudinal database for cohort tracking. In addition, these workshops have sought to determine the person on each campus who is ultimately responsible for submitting external data reports, including issues of data quality. This responsibility has been difficult to pinpoint.

The CCCOES Student Information System can collect and maintain the student information necessary to implement core indicators which deal with student progress (Core Indicators 1 through 3). The chief challenge for each institution will be to collect meaningful and timely information about student intent as the basis for defining cohorts of students for tracking. At present, our SIS system-through the

student admissions form–does not adequately identify student intent to permit definition of cohorts. Further, no campus in the system is currently updating student intent data on a routine basis.

Other challenges face campuses in implementing the Core Indicator model. Following the a description of the measure and data source required for each core indicator is a synopsis of the challenges facing CCCOES institutions in implementing that particular core indicator. All descriptions, with the exception of [bracketed material] and the italicized section accompanying each indicator entitled "*Colorado Challenge*" were taken directly from the AACC publication.

Core Indicator 1:	**Student Goal Attainment**
Measure:	The proportion of students who on leaving a community college report that their original goal in attending (or subsequent goal decided while enrolled) has been met.
Data Source(s):	Periodic surveys of the student population according to a longitudinal design that includes the determination of student goal(s) at entry and a follow-up soon after exit to determine if this goal has changed and/or it has been met. Most desirable is a method whereby student goals are assessed each time the student registers.
Colorado Challenge:	*Development of an instrument (e.g., application form) for trapping student goals at entry, particularly in the employment intent and transfer intention areas. A parallel challenge is to develop a method whereby student intent is updated at each registration period.*
Core Indicator 2:	**Persistence (Fall to Fall)**
Measure:	The proportion of an identified fall term entering community college student cohort that is still enrolled for

at least one credit the following fall term and has not completed a degree or certificate, reported each year from entry to exit. An "identified entering student cohort" is defined as all students registering for their first credits at the community college in a given term; a fall-term cohort is typically used for data analysis and reporting.

Data Source(s): The recommended data source is continuously updated longitudinal database that tracks an entering community college student cohort from entry to exit using data elements such as course and program enrollment and degrees and certificates awarded (e.g., Ewell, Jones, and Parker, 1988[2]).

Colorado Challenge: *Working with Community College Computer Services to program the and the structure necessary to establish a longitudinal database. Then, assigning of campus responsibility for updating cohort files based on registration surveys, course file information from SIS, and the degrees granted file. Also at issue is the concern about campus responsibility for data fidelity.*

Core Indicator 3: **Degree Completion Rates**

Measure: The proportion of an identified entering community college cohort officially enrolled in a degree program that actually completes a degree or certificate, as reported at annual intervals.

Explanation: The emergence of such regulations as Student Right-to-Know and numerous state reporting requirements has

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[2] Ewell, P.T., Parker, R.P, and Jones, D.P. (1988). Establishing a Longitudinal Student Tracking System: An Implementation Handbook. Boulder, CO: National Center for Higher Education Management Systems.

highlighted this statistic as a performance indicator, and it is thus impossible to ignore. Recognizing that community college students take as long as seven or eight years to earn a degree, the proposed indicator has no "endpoint" time limit. Also, unlike federal and state regulatory statistics, this indicator includes all entering students-not just those who are full-time, first-time-in-college students. While this may deflate reported graduation rates, it more fully reflects actual community college populations the majority of which are in fact part-time attenders. Given the sensitivity of this statistic, it should never be presented in isolation; it should be reported selectively so that attendance patterns, course-taking behaviors, and intention of different student groups are apparent. This indicator should always be reported in conjunction with persistence rates (Core Indicator 2).

Data Source(s):

The recommended data source is a continuously updated longitudinal database that tracks an entering community college student cohort from entry to exit using data elements such as date of initial enrollment, degree awarded, and duration of study. Cohorts should be constructed so that they are consistent with (but more inclusive than) those required for current federal and state reporting.

Colorado Challenge:

Same challenge as for #2. Caution in reporting rates so that meaningful and accurate information is reported. Implementation will provide an accurate count of graduation rates–unlike proposed Student Right to Know regulations– since a cohort may exist over the course of, say, six (6) to ten (10) years.

Core Indicator 4: **Placement Rate in the Work Force**

Measure: The proportion of an identified entering community college student cohort achieving a "marketable skill" (i.e., completing at least three occupational/technical courses in a particular field of training) who obtain employment in a field directly related to this skill within one year of last attendance.

Data Source(s): The predominant method used is a follow-up questionnaire administered to former students periodically by mail [Note: CCCOES strongly encourages telephone surveys as a maximal method to ensure higher response rates]. If available, state employment information (generally available through the state's Department of Labor or equivalent) provides a more direct method of assessment. Such information is now in place in seven states. The obvious limitation of this methodology is the fact that many state databases [including Colorado] do not contain the required job information to adequately identify occupation.

Colorado Challenge: *At the system level, to continue to work with the Department of Labor to tabulate state employment information. However, these data will not account for individuals who are self-employed, federal employees, nor graduates who have moved to other states. Would also require redefinition of "program completer" to include those who take three (3) occupationally-related courses, necessitating-again-identification of student intent at initial entry. At the campus level, to continue to survey students for information, including satisfaction with courses of study, utilizing the most current telephone numbers and/or addresses.*

Core Indicator 5: **Employer Assessment of Students**

Measure: The proportion of a sample of regional employers in a given field indicating that their employees who received training at the community college exhibit skills and job performance at rates equivalent or superior to all employees.

Data Source(s): The recommended method is a periodic cross-sectional survey of a sample of area employers using an open-ended questionnaire requesting an employer to list the specific programs and institutions from which they like to recruit or from which they obtain "their best employees". Because of typically higher response rates, this is preferred to the more typical "two-phase" follow-up method in which former students are first contacted to identify their employers and the employers then surveyed. Multiple attributes of performance should be assessed and a Likert-type rating scale of at least five points should be used in the questionnaire. If resources are available, in-depth interviews with employers are recommended.

Colorado Challenge: *To develop mechanisms to survey employers where it is not being done and to report the results of such surveys where it is being done. Every effort should be made to maximize response rates during the first phase. Implementation of this indicator This can increase employer responsiveness to college initiatives.*

Core Indicator 6: **Number and Rate Who Transfer**

Measure: The proportion of an identified entering community college cohort actively enrolled in a degree program at that institution and completing at least twelve semester

hours of credit (or equivalent) who enroll within two years for at least twelve college level credits in a degree program at a four-year college or university.

Data Source(s):

The preferred data source for this indicator is actual student record data obtained from the transfer institution. Available methodologies listed in order of desirability include:

- state-level enrollment information that directly matches community college and four-year public college attenders by means of student identification number.
- electronic transfer of transcript information in a defined format (e.g., SPEEDE, AACROA standard, North Texas Consortium).
- aggregate reporting obtained periodically from senior institutions.
- students self-reports obtained through follow-up questionnaire administered to former community college students.

Colorado Challenge:

At the system level, continue to provide campuses with annual aggregate data on student transfer and performance. At the campus level, to assess student transfer intentions at matriculation or thereafter to facilitate follow-up and institutional analyses.

Core Indicator 7: **Performance After Transfer**

Measure:

The proportion of regular college-level courses at the transfer (receiving) institution completed with a grade of "C" or better by students who previously attended the community college, compared to a parallel proportion

obtained for students who began their studies as first-time freshmen at the transfer institution.

Data Source(s): Same as Core Indicator 3.

Colorado Challenge: *Same as Core Indicator 6.*

Core Indicator 8: **Success in Subsequent, Related Coursework for Basic Skills Students**

Measure: The proportion of identified entering student cohort assessed as deficient in one or more of the basic skills (reading, writing, and computation) who subsequently: a) successfully complete developmental work intended to remediate this deficiency, and b) within one year complete, with a grade of "C" or better, their first college-level courses requiring the use of this skill.

Data Source(s): The recommended data source is a continuously updated longitudinal database that tracks an entering community college student cohort from entry to exit using data elements such as basic skill proficiency levels, course enrollments, and course grades (e.g., Ewell, Jones, and Parker).

Colorado Challenge: *To work with Community College Computer Services to program a structure for a longitudinal database for cohort tracking, including basic skills proficiency levels as well as student intent data. To routinely report this- and other Core Indicator- information.*

Core Indicator 9: **Demonstration of Critical Literacy Skills**

Measure: No single statistic satisfies the intent of this indicator.

Explanation: Literacy has become a complex social concept, but this does not absolve community colleges from demonstrating that they develop such skills. Assessing literacy requires a multiplicity of methods appropriate to the kinds of literacy tasks that students will be facing in the community and on the job. Mere data collection is not enough. Once the college community agrees that a particular set of literacy skills is important as an outcome, it must ensure that such skills are: a) taught throughout the curriculum in both transfer and occupationally related courses and b) regularly embodied in local assessments designed by faculty.

Data Source(s): Many methods are appropriate to determine literacy skills at both the institutional and programmatic level. Among those recommended are:

- faculty-designed instruments to be administered to students as appropriate and modeled on such national literacy assessments as the National Assessment of Educational Progress (NAEP) Adult Literacy Scales. Typically, these assessments present students with natural literacy tasks such as reading a set of instructions, interpreting published charts and graphs, completing a required form, or reading and interpreting a schedule.
- specially designed "in-basket" exercises that require students to assimilate a variety of material, interpret its significance, and prioritize it for action. Exercises of this kind can be

embedded in capstone experiences that are a part of many applied programs.

- exercise that require students to read and interpret a typical news story.
- specially designed questionnaire items for inclusion on student follow-up surveys about behavior in areas such as current reading habits, perceptions of current events, etc.

Colorado Challenge: *Address literacy as a community college outcome and develop agreement on its parameters and ways to measure it.*

Core Indicator 10: **Demonstration of Citizenship Skills**

Measure: No single statistic satisfies the intent of this indicator.

Explanation: Citizenship is also a complex attribute that requires the use of multiple evidence-gathering techniques to assess adequately, and requires an institution-wide process to ensure that its development and assessment are included in instructional delivery.

Data Source(s): Among the most promising methods that can be used in gathering information consistent with this indicator are:

- student portfolios documenting citizenship activities they have participated in while enrolled, such as volunteer work, memberships in student groups, active participation in political campaigns, etc.
- documentation of student participation in group or problem-solving exercises in which leadership and group-membership skills are potentially

demonstrated, along with appropriate occupational or technical skills.

- specially designed exercise included in regular course examinations that require students to determine the impact of their actions on others or their broader responsibilities to others.
- specially designed questionnaire items included in alumni follow-up surveys that determine whether the student has voted in a local election, participated in voluntary or community service work, or follows the news regularly.

Colorado Challenge: *Address citizenship as a community college outcome and develop agreement on its parameters and ways to measure it.*

Core Indicator 11: **Client Assessment of Programs and Services**

Measure: No single statistic currently meets the intent of this indicator.

Explanation: Responding to the intent of this indicator requires the institution to determine: a): the array of different clients that it serves; b); the nature, types, and volume of programs, services, and activities it provides to different clients; and c) the extent to which clients are involved and satisfied with programs, services, and activities. "Client" is a term that describes many different individuals, groups, and organizations coming into contact with community colleges for many reasons whose involvement and satisfaction must be independently determined and assessed. Successful reporting of this indicator will thereby require multiple

methods for gathering information, including surveys, focus group meeting, face-to-face and telephone interviews, and participant observation.

Data Source(s):

Some of the data sources that can be used to collect information consistent with this indicator are the following:

- specially designed evaluations administered to clients participating in programs and services to determine their expectations and the extent to which the program or service met, exceeded, or fell short of expectations.
- periodic surveys carried out with client groups; these are typically mail or telephone surveys using an instrument designed to collect information about both client involvement and satisfaction with the program or service.
- written reports by professional staff members based on: a) observation of clients participating in programs and services and resulting expressions of satisfaction and b) interviews with clients during and after contact with the program or service
- focus group meetings with client groups to determine involvement and satisfaction with programs and services.

Colorado Challenge:

To continue to encourage campuses to address client satisfaction and opinions about programs and services.

Core Indicator 12: **Responsiveness to Community Needs**

Measure: No single statistic currently meets the intent of this indicator.

Data Source(s): Some of the data sources that can be used to collect information consistent with this indicator are the following:

- periodic needs assessments carried out with citizens in the college's service region; these are typically mailed or telephone household surveys, using an instrument designed to collect information about both current educational and service needs, and about contact and satisfaction with the college.
- surveys and/or focus group meeting with community organizations, citizen's groups, employers, etc. to determine needs and current levels of satisfaction.
- environmental scanning processes designed to systematically examine the content of printed matter such as newspaper stories, editorials, job advertisements, and employment and other socioeconomic data about community trends, to determine long-term patterns of community development and future needs.
- specially designed evaluations periodically administered to participants in each program or event sponsored by the college, to assess the expectations of those participating and the degree to which their expectations were met.

Colorado Challenge: *To encourage and refine present efforts on the campus level*

Core Indicator 13: **Participation Rate in Service Area**

Measure: The proportion of the total population aged 17 or over residing in the designated service area of the community college, participating in at least one organized activity (course, program, service, event, etc.) sponsored by the college in the past year.

Data Source(s): The most common method is attendance records at all college-sponsored classes, events, activities, etc. maintained by the college. The recommended method is a periodic community impact survey administered to a representative sample of residents in the service region. This survey should contain items describing various types of contact with the college (formal and informal), and overall reactions and satisfaction rates.

Colorado Challenge: *To continue to encourage campuses to address penetration rates through common methodologies.*